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ABSTRACT

The primary purpose of this investigation was to compare two preservice professional teacher education programs at the University of Northern Iowa during the first semester of student enrollment. Comparisions were made in the areas of academic achievement and certain dimensions of personality, using an analysis of variance with pre- and posttest scores obtained from five different instruments. In general, results suggested that there were no significant differences between the two programs on the variables selected for study. Limitations of the specific research instruments as well as the time limitation of one semester are cited as possible factors contributing to the results. (Authors/MJB)

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# AN EVALUATION OF SELECTED VARIABLES IN TWO PRESERVICE TEACHER EDUCATION PROGRAMS

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# AN EVALUATION OF SELECTED VARIABLES IN TWO PRESERVICE TEACHER EDUCATION PROGRAMS

## ABSTRACT

The primary purpose of this investigation was to compare two preservice professional teacher education programs during the first semester of student enrollment. Analysis of the data was carried out using an analysis of variance technique with the pre and posttest scores obtained from five different instruments. In general, results suggested that there were no significant differences between the two programs on the variables selected for study. However, the specific research instruments selected as well as the time limitation of one semester may well have been important limiting factors in this study. Follow up studies of the subjects were recommended to establish the full impact of the program.

## AN EVALUATION OF SELECTED VARIABLES IN TWO PRESERVICE TEACHER EDUCATION PROGRAMS

The type of evaluation in teacher education has been a topic of considerable discussion in recent years. At the center of this discussion has been a concern with which elements of a teacher preparatory program should be evaluated. Historically, programs have been evaluated in one of three ways: 1) the program, itself; 2) the competence of the teachers graduating from a particular program; or 3) an assessment of the learning outcomes of children taught by these teachers. (5)

Past evaluative efforts have focused on specific isolated areas within teacher education rather than on general program research. For example, Reynard (2), summarizing research in teacher education programs prior to 1963, found ample research in the specific areas of student teaching and teacher attitudes. Throughout the '60's, Stiles and Parker (4) report ". . . . evaluation of entire teacher education programs . . . . is spotty and inadequate."

In 1967, when granting funds to ten model elementary education programs, the U.S. Office of Education required each to set teacher education program goals in terms of expected and measurable teacher behaviors. (1) This combination of federal monies and program models helped change the focus of research toward entire program development and, in turn, evaluation began to focus on program outcomes.

Reflecting the impetus for program development, the faculty of the University of Northern Iowa, in May, 1973, approved a program revision for the common professional sequence in teacher education. Beginning in January, 1974, the new program was to be gradually implemented over

a three year period of time. During the implementation phase, two pre-service teacher education programs were operating simultaneously.

The simultaneous operation of two common professional sequence programs for the preparation of teachers afforded an opportunity to assess change between programs. It presented a unique possibility for both descriptive and experimental design and data collection.

The traditional professional sequence program in teacher education at the University of Northern Iowa consisted of a three semester enrollment in a series of courses common to all students regardless of major. Three courses made up this common core.

The new professional sequence, also three semesters in length, differed from the traditional in terms of: 1) smaller instructional components; 2) more clearly defined instructional areas; 3) specific attention to values and interpersonal relationships; and 4) interaction between students and various faculty members. A total of eight courses made up the new sequence.

The purpose of the present investigation was to evaluate student change in the areas of academic achievement plus certain dimensions of personality. Specific change was evaluated between programs during the first semester enrollment. Specifically, the study was designed to determine and compare: 1) biographical information; 2) selected affective components; 3) certain personality dimensions; 4) open- and closed mindedness; and 5) cognitive achievement in the area of human growth and development of students enrolled in the two programs.

## METHODOLOGY

Subjects. All students (N=420) enrolled in either of the preservice teacher education programs were identified as potential subjects. Of these, 282 participated in the evaluation study. Eighty-nine were designated the control group and 193 were identified as the experimental group.

Instrumentation. Students were pre- and post-tested using the following instruments; California Psychological Inventory (CPI). Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B), Fundamental Interpersonal Relations Orientation-Feelings (FIRO-F), Dogmatism Scale-Form E, and a Human Growth and Development Cognitive Achievement Instrument. Biographical information, secured directly from the registrar's office, included age, classification, size of high school graduating class, ACT composite score, total credit hours earned, total grade points earned, and grade point averages.

Treatment. The major distinction between the groups was the preservice teacher education program in which each were enrolled. The control group was enrolled in a 1 hour field experience component and a 4 credit hour course designed to cover the human growth and development and introduction to education components. The experimental group was enrolled in a 2 hour human growth and development course, a 1 hour field experience component, and a 2 hour value clarification seminar. Therefore, treatment differences included varying credit hours, course explicitness, and specific emphasis placed on the affective dimension of teacher education.

Design. The study utilized a split-plot design (3). Due to section divisions within main groups, the nested design was deemed appropriate.

Procedure. Students were pre-tested prior to the beginning of the first semester of their enrollment in the pre-service teacher education program. Post-testing occurred at the conclusion of that first semester of enrollment.

Analysis. Biographical information was analyzed using the t test for the difference between independent means. For pre- post-test data, an analysis of variance was utilized on each variable.

## RESULTS

Table 1 summarizes the biographical information for the two groups. The control group was found to be older and almost a full year ahead of the experimental group in classification. No differences were found in size of high school graduating class, ACT composite scores, or grade point averages.

Table 1 - Means and t Values for the Comparison of the Experimental and Control Groups on Selected Biographical Information Variables.

| Variable | Group | Means | t Value |
|---|---|---|---|
| Age | Control | 21.812 | 6.9733* |
| | Experimental | 19.549 | |
| Classification | Control | 2.624 | 11.0404* |
| | Experimental | 1.884 | |
| Size of High School Graduating Class | Control | 223.180 | 0.1006 |
| | Experimental | 225.198 | |
| ACT Composite Scores | Control | 22.052 | 0.7509 |
| | Experimental | 22.397 | |
| Total Hours Earned | Control | 58.494 | 15.2327* |
| | Experimental | 34.745 | |
| Total Grade Points Earned | Control | 159.602 | 12.9602* |
| | Experimental | 95.719 | |
| Grade Point Averages | Control | 2.727 | 0.4561 |
| | Experimental | 2.751 | |

* Indicates significance at the .05 level

Table 2 summarizes the F values for the FIRO-B and FIRO-F scales. No scales were found to be significant.

Table 2 - F Values for the Comparison of the Control and Experimental Groups on Scales of the FIRO-B and FIRO-F.

| FIRO-B Scale | F Value | FIRO-F Scale | F Value |
|---|---|---|---|
| Expressed Inclusion | 0.884 | Expressed Inclusion | 0.077 |
| Wanted Inclusion | 0.665 | Wanted Inclusion | 0.995 |
| Expressed Control | 0.468 | Expressed Control | 0.111 |
| Wanted Control | 1.624 | Wanted Control | 0.387 |
| Expressed Affection | 1.971 | Expressed Affection | 0.690 |
| Wanted Affection | 0.412 | Wanted Affection | 0.091 |

Table 3 summarizes the F values for the CPI scales. Two scales, communality and achievement via indpendence, were found to be significant at the .05 level.

Table 3 - F Values for the Comparison of the Experimental and Control Groups on Scales of the California Psychological Inventory.

| CPI Scale | F Value | CPI Scale | F Value |
|---|---|---|---|
| Dominance | 0.16602 | Tolerance | 0.40562 |
| Capacity for Status | 0.16695 | Good Impression | 0.16879 |
| Sociability | 0.32751 | Communality | 4.37771* |
| Social Presence | 0.10759 | Achievement via Conformance | 0.27072 |
| Self-Acceptance | 0.32821 | Achievement via Independence | 5.37424* |
| Sense of Well-Being | 1.46392 | Intellectual Efficiency | 0.70903 |
| Responsibility | 1.20513 | Psychological-Mindedness | 0.01613 |
| Socialization | 2.05247 | Flexibility | 0.97479 |
| Self-Control | 0.01110 | Femininity | 0.54160 |

* Indicates significance at the .05 level

Tables 4 and 5 summarize the means and F values for the cognitive achievement instrument and the dogmatism scale. No significant differences between the groups were found in either case.

Table 4 - Comparison of the Experimental and Control Groups on the Dogmatism Scale - Form E.

| Group | Pretest | Posttest |
|---|---|---|
| Control | 150.133 | 149.506 |
| Experimental | 148.660 | 145.780 |
| Total | 149.579 | 148.105 |
| F-Value | .670 | |

Table 5 - Comparison of the Experimental and Control Groups on the Human Growth and Development Cognitive Achievement Instrument.

| Group | Pretest | Posttest |
|---|---|---|
| Control | 21.89 | 24.49 |
| Experimental | 22.28 | 25.22 |
| Total | 22.19 | 25.04 |
| F-Value | .11154 | |

## DISCUSSION

In the present evaluation study of two approaches to pre-service teacher education programs, significant differences were not found upon completion of the first semester of enrollment. Only 2 of the CPI scales indicated significance at the .05 level and insufficient evidence existed to attribute these to program differences.

Although specific attention was given to the affective dimension in the experimental group program, it was probable that the instruments selected were insufficiently sensitive to reflect any slight attitude shifts which may have occurred.

The limited time between the pre- and post-testing session may also have been a factor in the present study. The evaluation of educational change over a single semester of enrollment may not reflect the impact of the program on future teaching performance. Follow-up studies of the subjects would be necessary to determine the total program impact.

Although treatment differences reflected varying credit hours, course explicitness, emphasis on affective dimensions, and classroom settings, the present evaluation study failed to identify significant differences between the experimental and control groups on selected variables. Therefore, it was concluded treatment differences during the first semester of enrollment did not produce significant differences between students.

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